

Appendix 1. Details of cost of interventions, cost savings, and cost avoidance calculations.

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| Cost of interventions | <p>The increased cost of therapy with the intervention was (the cost of after-clinical pharmacy intervention therapy) minus (the cost of before-clinical pharmacist intervention therapy), when this is in +ve values. The cost of the before-clinical pharmacist intervention therapy was based on the assumed duration of the full course of the original therapy without the intervention, while the cost of the after-clinical pharmacist intervention therapy was based on the actual original therapy duration until intervention, added to the cost of the alternative therapy (therapy after the change) based on the duration of its full course. The cost of a full course of therapy was calculated based on a 90-day prescription refills cost for chronic medications and as per the prescriber order or the local HMC protocol for the acute medical illness medications.</p> |
| Cost saving           | <p>The reduced cost of therapy with the intervention was (the cost of before-clinical pharmacist intervention therapy) minus (the cost of after-clinical pharmacy intervention therapy), when this is in +ve values. The cost of the before-clinical pharmacist intervention therapy was based on the assumed duration of the full course of the original therapy without the intervention, while the cost of the after-clinical pharmacist intervention therapy was based on the actual original therapy duration until intervention, added to the cost of the alternative therapy (therapy after the change) based on the duration of its full course. The cost of a full course of therapy was calculated based on a 90-day prescription refills cost for chronic medications and as per the prescriber order or the local HMC protocol for the acute medical illness medications.</p>   |

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| Cost avoidance | <p>For each intervention with the potential to prevent an ADE, cost avoidance was calculated by multiplying the probability of an ADE in the absence of the intervention (estimated via the Nesbit et al. method) by the cost of an ADE. The overall cost avoidance was the sum of avoided costs with all interventions for DRPs.</p> |
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\*HMC: Hamad Medical Corporation, ADE: adverse drug event, DRP: drug-related problem